

**CE CIT UOB**  
**ITCE260 (Circuit Analysis)**

**Test 1**

**Time: 1 hour**

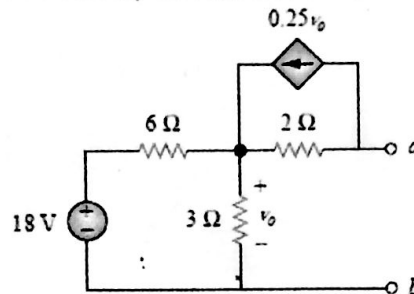
**Date: 7 Nov, 2013**

Dr. Riyadh Al-Hakim

<b>Name:</b> _____	<b>Sec: 1</b>	<b>ID #:</b> _____
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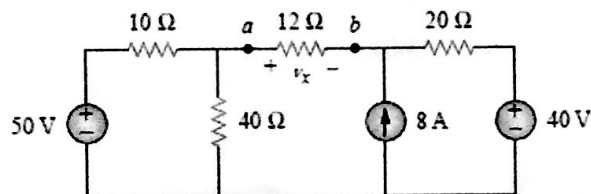
**Q1 [35 marks]**

Find  $R_L$  (connected between a-b terminals) that absorbs maximum power. Find this power.



**Q2 [35 marks]**

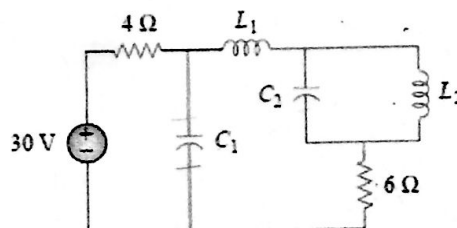
Apply source transformation then superposition to find  $v_x$



**Q2 [30 marks]**

Find the energy stored and power dissipated by each R, L and C.

$C_1=0.1$  F,  $C_2=0.2$  F,  $L_1=3$  H,  $L_2=5$  H



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Test 2

Time: 1 hour

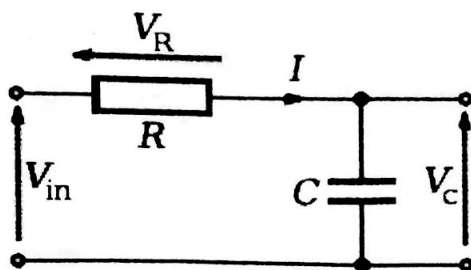
Date: 22 Dec, 2013

Dr. Riyadh Al-Hakim

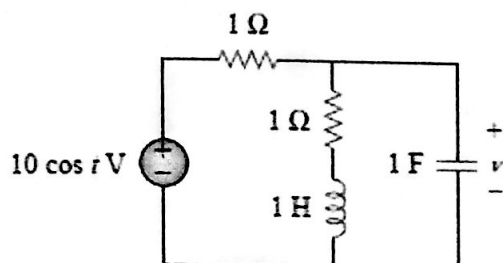
Name: _____	Sec: 1	ID #: _____
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**Q1 [40 marks]**

In the following circuit, assume  $R = 50 \Omega$ ,  $C = 0.1 \text{ F}$  and  $V_{in} = 100(u[t] - u[t-8])$ . Find  $V_C$  and  $I$  at  $t = 0$ ,  $t = 2 \text{ s}$ ,  $t = 5 \text{ s}$ ,  $t = 10 \text{ s}$ , and  $t = \infty$ .



**Q2 [40 marks]**



In the following circuit, find  $v$  :

- In rectangular form
- In polar form
- In time domain form

**Q3 [20 marks]**

In the following circuit:

- Find  $\omega$  for maximum current
- Calculate this maximum current

